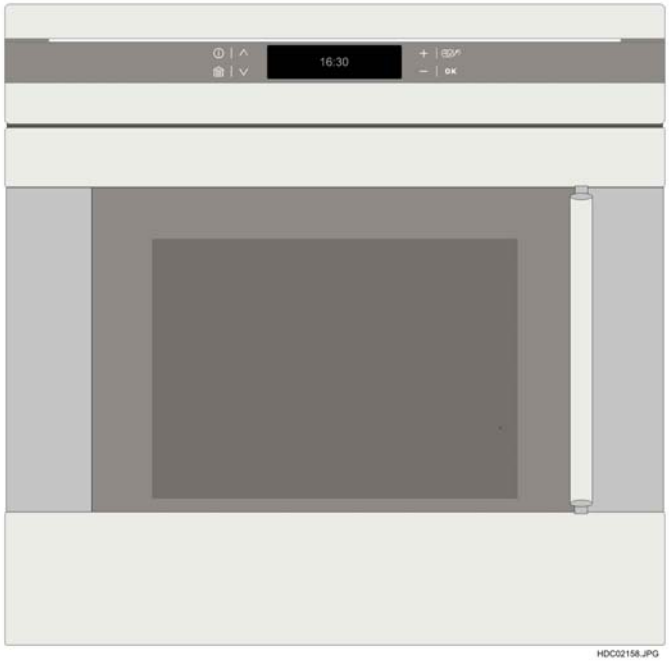
SERVICE MANUAL

COOKING



ã ELECTROLUX HOME PRODUCTS
Corso Lino Zanussi, 30
I - 33080 PORCIA /PN (ITALY)
Tel +39 0434 394850
Fax +39 0434 394096

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Wall Ovens

WITH THE VISION ELECTRONIC CONTROL SYSTEM

Version for Italy, Europe, UK (without roast spit)

TABLE OF CONTENTS

1 - INTRODUCTION ---- p. 5
1.1 - PURPOSE OF THIS MANUAL ---- p. 5
1.2 - ESD - ELECTROSTATIC DISCHARGE ---- p. 5

2 - THE VISION CONTROL SYSTEM ---- p. 6
2.1 - INTRODUCTION ---- p. 6
2.2 - GENERAL BLOCK DIAGRAM OF THE SYSTEM ---- p. 6
2.3 - CONTROL UNIT ---- p. 8
2.4 - TOUCH SENSOR BOARDS ---- p. 10
2.4.1 - POSITIONS OF THE TOUCH SENSOR BOARDS ON THE FRONT PANEL ---- p. 11
2.5 - OVC2000 POWER BOARD (RELAYS) ---- p. 12
2.5.1 - CONNECTIONS TO THE POWER BOARD ---- p. 13
2.5.2 - RELAYS AND THEIR FUNCTIONS ---- p. 14
2.6 - LIGHT BAR BOARD ---- p. 15
2.7 - OVEN TEMPERATURE SENSOR ---- p. 16
2.7.1 - GRAPH OF TEMPERATURE VS SENSOR RESISTANCE ---- p. 16
2.8 - TECHNICAL SPECIFICATIONS ---- p. 17
2.8.1 - SOFTWARE VERSION ---- p. 17
2.8.2 - TIMES ---- p. 17
2.8.3 - AUTOMATIC SHUTOFF ---- p. 17
2.8.4 - DIMENSIONS ---- p. 17
2.8.4.1 - MINIMUM DIMENSIONS OF COMPARTMENT FOR BUILT-IN INSTALLATION ---- p. 17
2.8.4.2 - USEFUL DIMENSIONS OF OVEN CHAMBER ---- p. 17
2.8.5 - POWER RATINGS ---- p. 17

3 - CONTROLS ---- p. 19
3.1 - CONTROL PANEL ---- p. 19
3.1.1 - DISPLAY ---- p. 19
3.1.2 - KEYS ---- p. 20
3.2 - DESCRIPTION OF DISPLAY ---- p. 21
3.2.1 - SYMBOLS SHOWN ---- p. 21

4 - HOW TO USE THE VISION CONTROL SYSTEM ---- p. 22
4.1 - SETTING THE LANGUAGE ---- p. 22
4.2 - SETTING CONTRAST AND BRIGHTNESS ---- p. 22
4.3 - SETTING THE TIME OF DAY ---- p. 22
4.4 - USING THE MENU ---- p. 23
4.4.1 - HEATING INDICATOR ---- p. 24
4.4.2 - RAPID HEATING INDICATOR ---- p. 24
4.4.3 - RESIDUAL HEAT INDICATOR ---- p. 24
4.4.4 - EXACT TEMPERATURE INDICATOR ---- p. 24
4.5 - OVEN LIGHT ---- p. 24
4.6 - THE FUNCTION MENU ---- p. 25
4.6.1 - TABLE OF PRESET TEMPERATURES ---- p. 26
4.7 - ASSISTED COOKING MENU ---- p. 27
4.7.1 - TABLE OF WEIGHTS ---- p. 29
4.8 - ASSISTED COOKING WITH WEIGHT AUTOMATIC ---- p. 30
4.9 - ASSISTED COOKING WITH AUTOMATIC PROGRAMME ---- p. 30
4.10 - MANUAL COOKING ---- p. 31
4.11 - OVEN FUNCTION MENU ---- p. 31
4.12 - USING OVEN FUNCTIONS ---- p. 32

5 - THE “MY PROGRAMMES” MENU ---- p. 33
5.1 - STORING A PROGRAMME ---- p. 33
5.2 - RECALLING A PROGRAMME ---- p. 34

6 - BASIC SETTINGS MENU ---- p. 35
6.1 - USING BASIC SETTINGS ---- p. 36
6.2 - AUTOMATIC CHANGE IN DISPLAY BRIGHTNESS ---- p. 36
6.3 - BASIC SETTINGS USED EVERY DAY ---- p. 36
6.3.1 - SET + GO ---- p. 36
6.3.2 - ACTIVATING THE SET+GO FUNCTION ---- p. 36
6.3.3 - HOW TO START SET+GO ---- p. 37
6.3.4 - HEAT-AND-HOLD ---- p. 37
6.3.5 - SELECTING THE HEAT-AND-HOLD FUNCTION ---- p. 37
6.3.6 - EXTRA TIME FUNCTION ---- p. 38

6.3.7 - SELECTING THE EXTRA TIME FUNCTION ---- p. 38
6.3.8 - SERVICE FUNCTION ---- p. 38
6.4 - ADDITIONAL FUNCTIONS ---- p. 39
6.4.1 - MINUTE MINDER ---- p. 39
6.4.2 - DURATION OR END TIME ---- p. 39
6.4.3 - RESIDUAL HEAT FUNCTION on DURATION OR END TIME ---- p. 40
6.4.4 - COMBINING DURATION AND END TIME ---- p. 40
6.4.5 - KEY LOCK ---- p. 40
6.4.6 - APPLIANCE LOCKED FUNCTION ---- p. 41
6.4.7 - AUTOMATIC SHUTOFF ---- p. 41
6.5 - DEMO FUNCTION ---- p. 42

7 - ERROR CODES ---- p. 43

8 - DIAGNOSTIC TESTS ---- p. 44
8.1 - ACTIVATION ---- p. 44
8.2 - HEATING COMPONENTS ---- p. 44
8.3 - CHECKING THE OVEN TEMPERATURE SENSOR ---- p. 45
8.4 - DISPLAYING THE SOFTWARE VERSION ---- p. 45
8.5 - DISPLAY TEST ---- p. 45
8.6 - SETTING THE BRIGHTNESS ---- p. 45
8.7 - TO END THE TEST ---- p. 46
8.8 - CHECKING THE ON / OFF KEY AT THE END OF THE TEST ---- p. 46

9 - FUNCTIONAL DIAGRAM ---- p. 47
9.1 - LEGEND FOR DIAGRAM ---- p. 48
9.2 - FUNCTIONAL DESCRIPTION OF OVEN ---- p. 48

1 - INTRODUCTION

1.1 - THE PURPOSE OF THIS MANUAL

The purpose of this manual is to provide basic information for troubleshooting (with the aid of troubleshooting manual no. 599387467) and repairing ovens equipped with the VISION electronic control system.

1.2 - ESD - ELECTROSTATIC DISCHARGE AND ITS EFFECT ON THE COMPONENTS

The interface for the control unit is not fitted with an internal device to protect against electrostatic discharge. When effecting repairs, therefore, the service engineer must check for stabilization of the potential on the oven casing (i.e. discharge any static electricity by touching the oven casing) in order to prevent the possibility of overload, which might damage the circuit boards.
The same care is necessary when handling circuit boards supplied as spare parts (i.e. not yet fitted to the appliance), which must be removed from the protective bag in ESD only after stabilizing the potential (i.e. discharging any static electricity) and only then installed in the appliance.
Important: The theory behind the process of electrostatic charge and discharge is not discussed in this Manual, since the tangible effects are considered to be more important. However, the effects are felt frequently when touching a metal handle and feeling the electrostatic discharge in the form of a minor shock.
But what happens when stabilization of the potential takes place with semi-conductor components (i.e. components on a circuit board, such as integrated circuits, microprocessors etc.)?
Stabilization of the potential takes place across the internal structure of the semi-conductor component. This does not necessarily lead to the immediate destruction of the component; subsequent malfunctions across damaged internal connections may be more harmful, and these occur only as a result of overheating or current overloads.
It is true that almost all sensitive semi-conductor components (such as MOS circuits) have been improved by the addition of protective measures, but the internal structures of these components are today smaller than, for example, ten years ago, which tends to increase their sensitivity to the previous levels.

Important

Which components are susceptible to damage by static electricity during repairs?
All circuit boards with control and command accesses (door switches, food probes etc.), exposed connections and microprocessors, and other circuits with that can be freely accessed.

Examples:

- Programming units connected to the food probe and the door switch
- Programming units whose processors are accessible (due to their high costs, the protective systems are only partially effective)
- W.O.E.C. control units
- S.O.E.C. control units
- C.H.E.C. control units
- KRONOS control units
- R.H.E.A. control units
- AVANTGARDE control units
- VISION control units

2 - THE VISION CONTROL SYSTEM

2.1 - INTRODUCTION

The Vision control system is an integrated system for controlling ovens. It consists of an electronic programming unit controlled by a microprocessor that is programmable (using a personalised programme). The system enables the user to choose the heating element(s), cooking temperature and time, and cooking programmes that are pre-programmed at the factory, but which can also be customized for special cooking procedures. The system is also equipped with graphic symbols, multilingual wording, and error codes that facilitate troubleshooting when a malfunction occurs.

2.2 - GENERAL BLOCK DIAGRAM OF THE SYSTEM

The system is composed of a number of components and can be depicted schematically as shown in Fig. 1.
The control logic (hardware and software) for the system is incorporated into the control unit.
This unit consists of a circuit board with touch sensors for system control, a display, and a buzzer.
The power board directly controls all electrical loads through a series of relays.
The sensors (oven sensor, and meat temperature sensor if used) send information about the various temperatures to the system, which uses the information to control the appliance in the best way possible.
A circuit board that powers the light bar is also connected to the control unit.

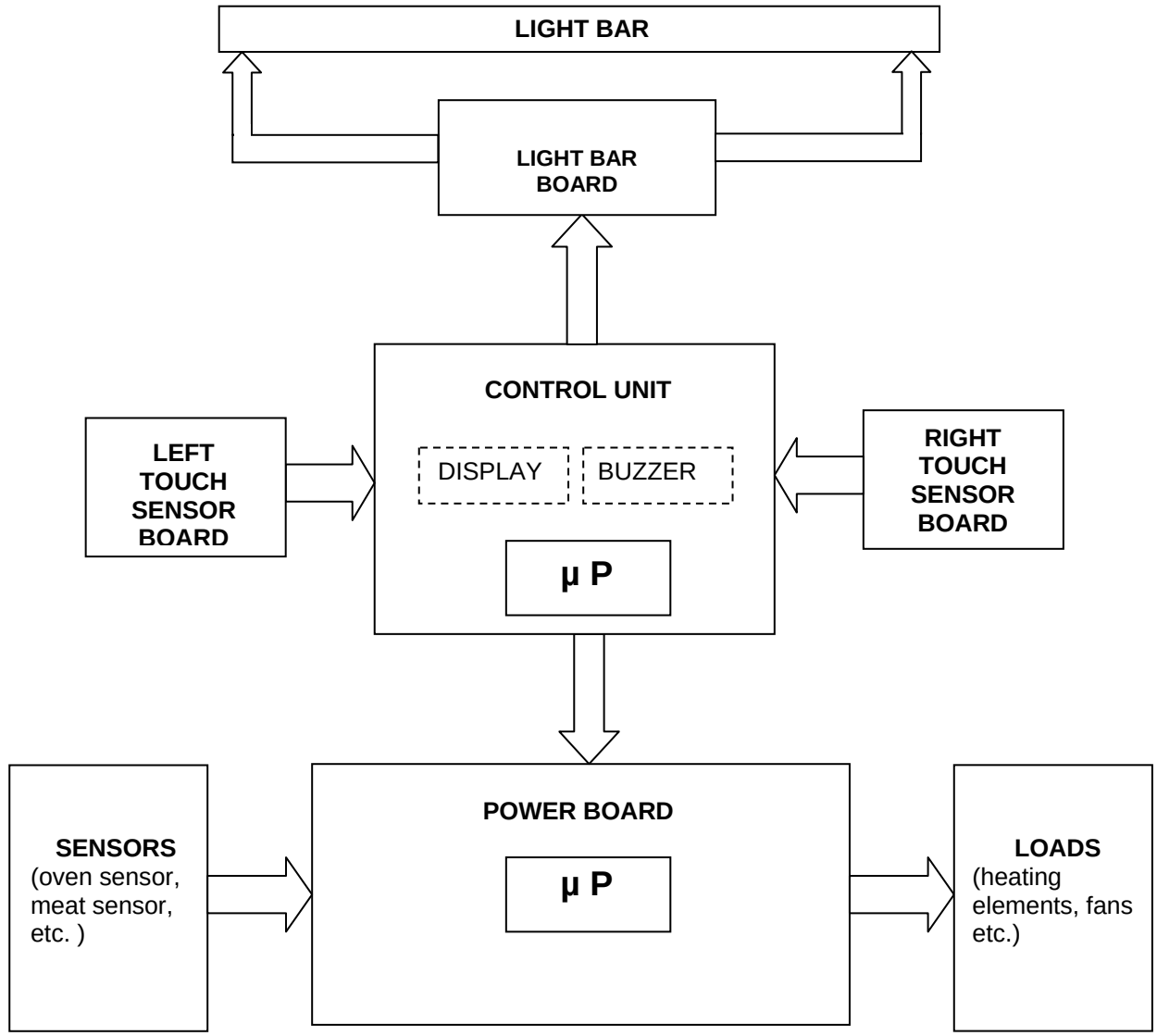
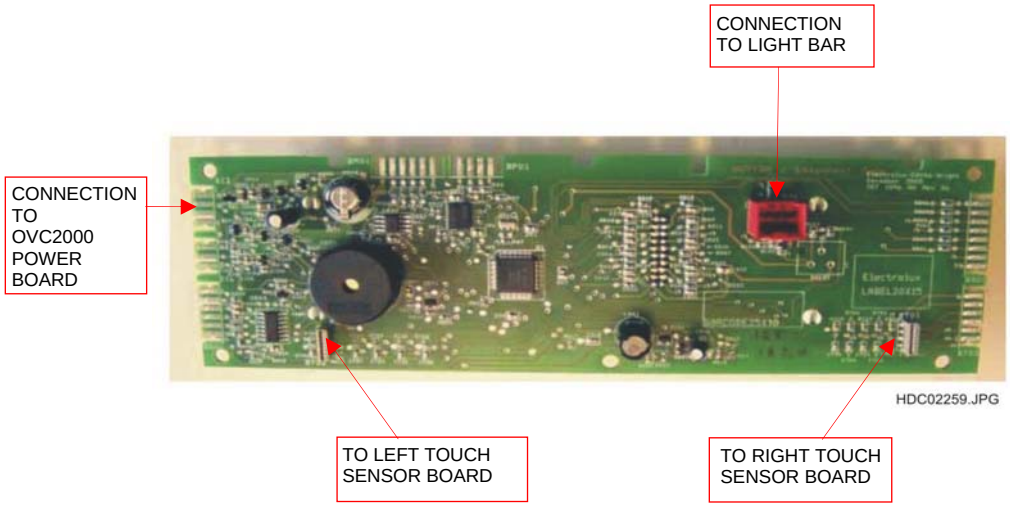


Fig. 1

NOTE: The control unit and the power board are equipped with circuitry that can be programmed using suitable software. These boards are programmed at the factory.

2.3 - CONTROL UNIT

The control unit contains a low-voltage board that includes the logic circuitry, a display and a buzzer.
This module is connected to the power board (relays) by a set of connectors and a power cable.
The memory in the system contains custom settings which have been programmed for the appliance that the system is connected to.
It also features self-testing and automatic diagnosis of malfunctions. In case of malfunction, an error code with an informative message is displayed, and system functions may be shut down.
The functions performed by the control unit depend on its programming.
The unit is enclosed in a plastic housing that is installed on the front panel of the appliance.


CONNECTION TO LIGHT BAR
CONNECTION TO OVC2000 POWER BOARD
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TO LEFT TOUCH SENSOR BOARD
TO RIGHT TOUCH SENSOR BOARD

Fig. 2

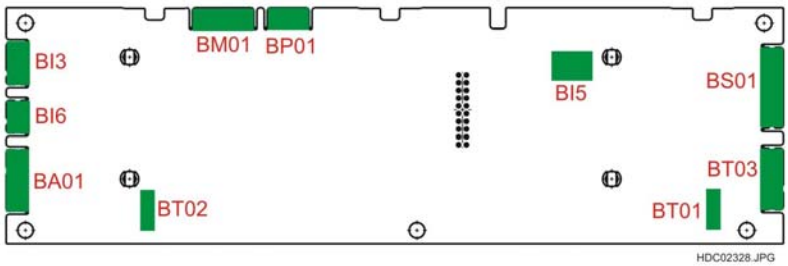

Fig. 3

BA01 - NOT USED (CONNECTION TO OVC1000)
BI3 - CONNECTION TO OVC2000 POWER BOARD
BI5 - CONNECTION TO LIGHT BAR BOARD
BI6 - NOT USED (CONNECTION FOR CONTROLLING DIFFERENT LEVELS IN THE OVEN)
BM01 - NOT USED (FOR FACTORY PROGRAMMING)
BP01 - NOT USED (FOR FACTORY PROGRAMMING)
BS01 - NOT USED
BT01 - CONNECTION TO LEFT TOUCH SENSOR BOARD
BT02 - CONNECTION TO RIGHT TOUCH SENSOR BOARD
BT03 - NOT USED

Circuit board for Vision control unit

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Fig. 4

Circuit board with its plastic housing

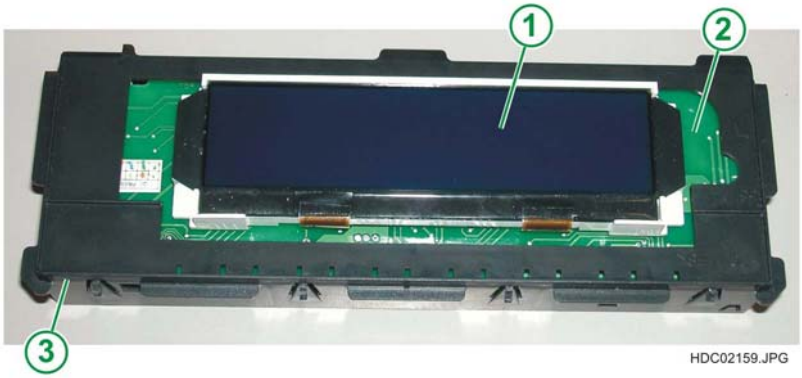

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Fig. 5

1 - DISPLAY
2 - VISION CONTROL BOARD
3 - PLASTIC HOUSING

2.4 - TOUCH SENSOR BOARDS

This oven is equipped with a control system that uses touch sensors.
To enter commands, two touch sensor boards are used instead of the classic buttons that control switches on the control unit.
The touch system consists of two sensor boards that are glued onto the back of a small front panel made of glass. The boards can recognize a finger at a distance of approx. 4 mm (the thickness of the glass panel) from the sensors.
Each sensor board has 5 switch units with touch sensors.
The functions of the various keys are set by the software in the control unit.

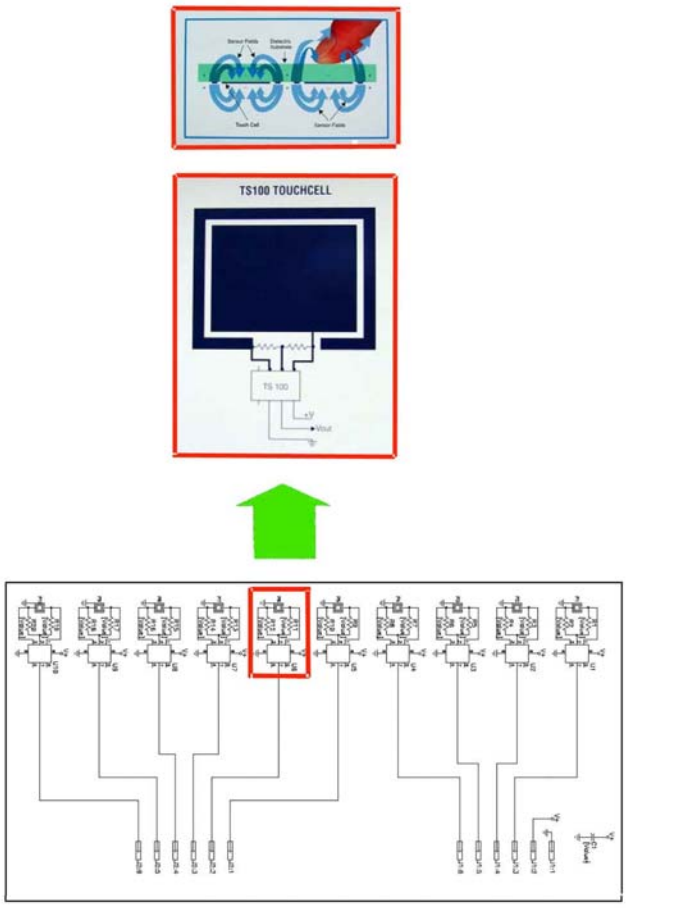

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Fig. 6

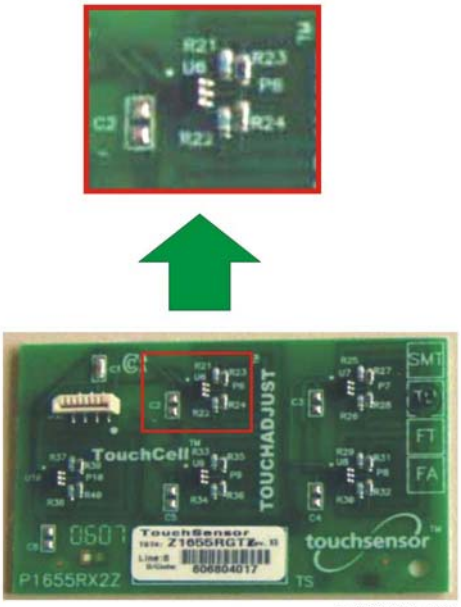

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Fig. 7

2.4.1 - POSITIONS OF THE TOUCH SENSOR BOARDS ON THE FRONT PANEL

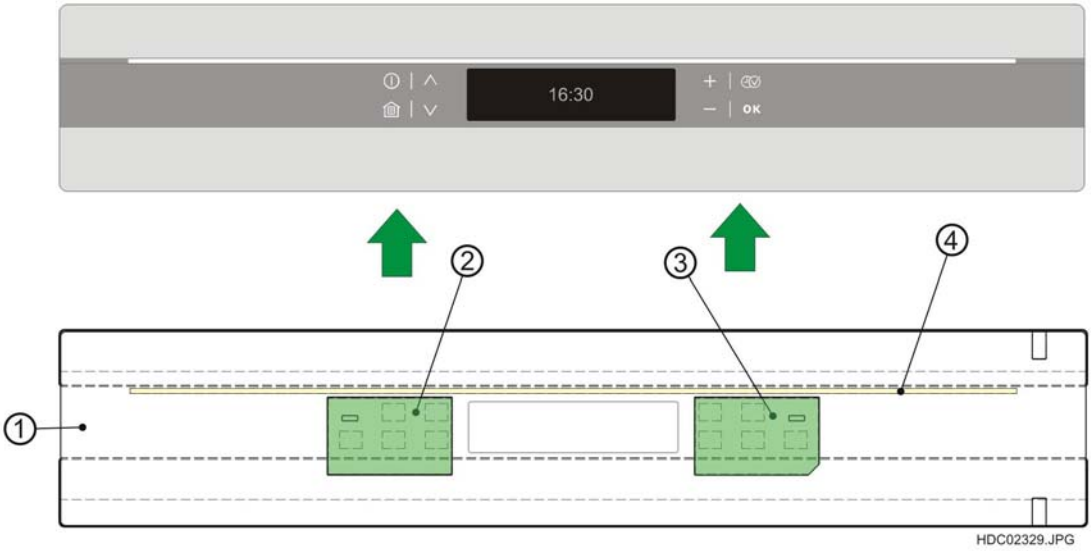


Fig. 8

1 - GLASS FRONT PANEL
2 - RIGHT TOUCH SENSOR BOARD
3 - LEFT TOUCH SENSOR BOARD
4 - LIGHT BAR

RIGHT TOUCH SENSOR BOARD

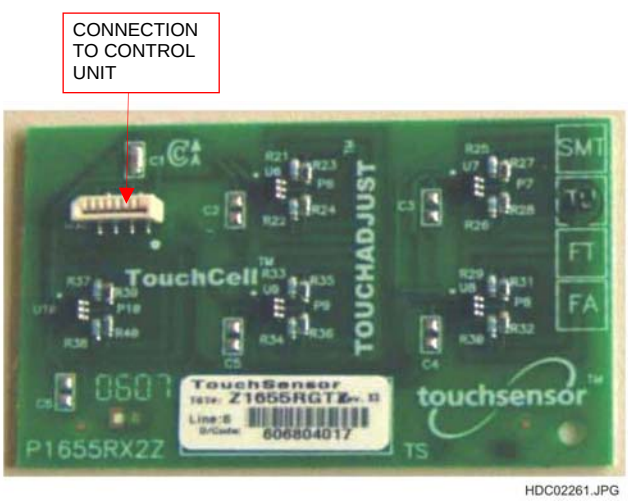


Fig. 9

LEFT TOUCH SENSOR BOARD

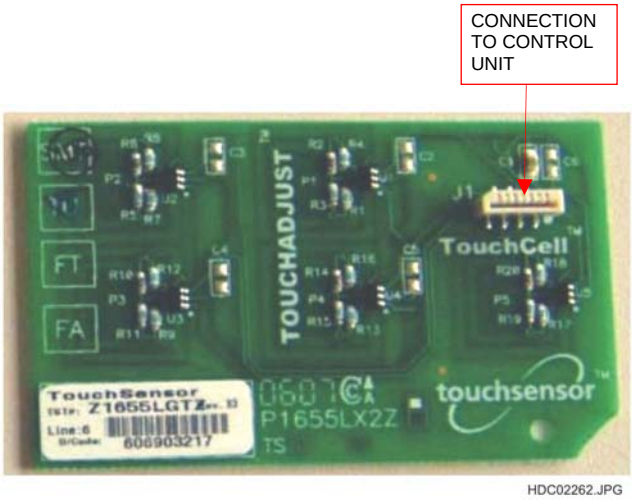


Fig. 10

2.5 - OVC2000 POWER BOARD (RELAYS)

The power board controls the heating elements, the convection fan, the cooling fan and the oven light according to the information received from the control/display board.
The power board is composed of a power supply section (which is also used to supply low voltage to the control/display board) and eleven relays that control the heating elements and low power components (oven lamp, fans and roast spit) in accordance with the software configuration of the model involved.
All the functions on the board are controlled by an internal microprocessor.
A door lock system for the self-cleaning function may also be connected to the power board.
The main connections to the power board are illustrated below (see Fig. 11).

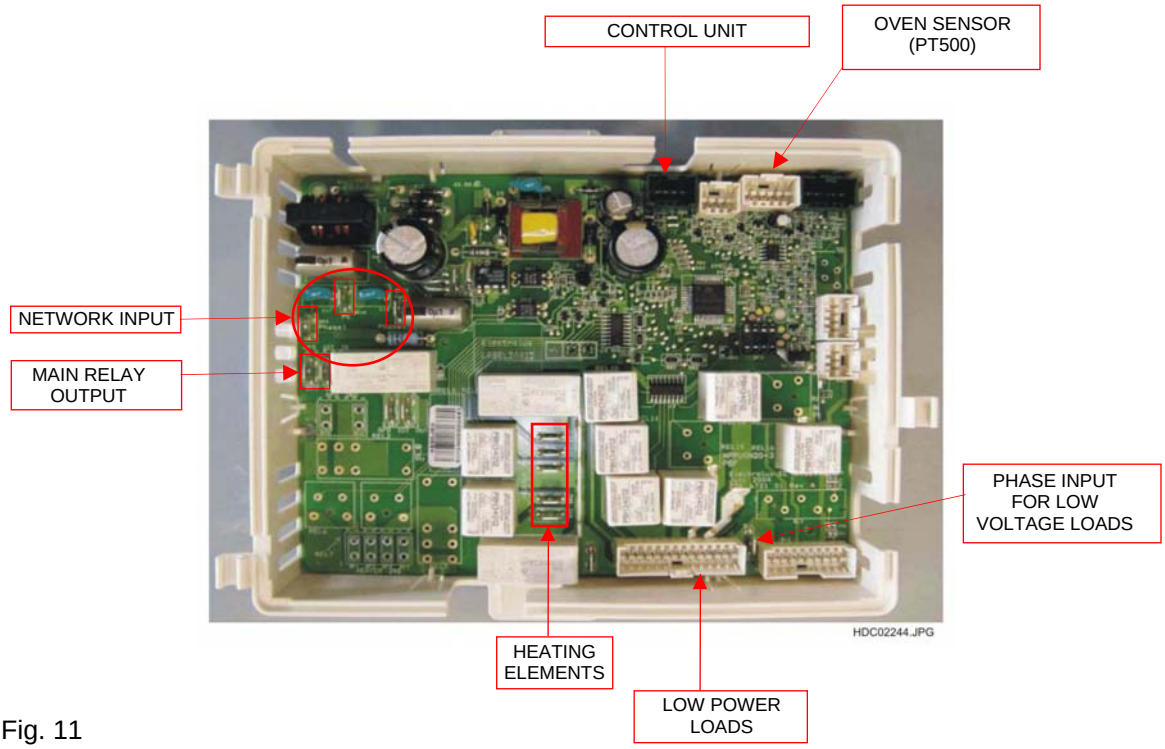


Fig. 11

Here are the positions of the relays and connections.

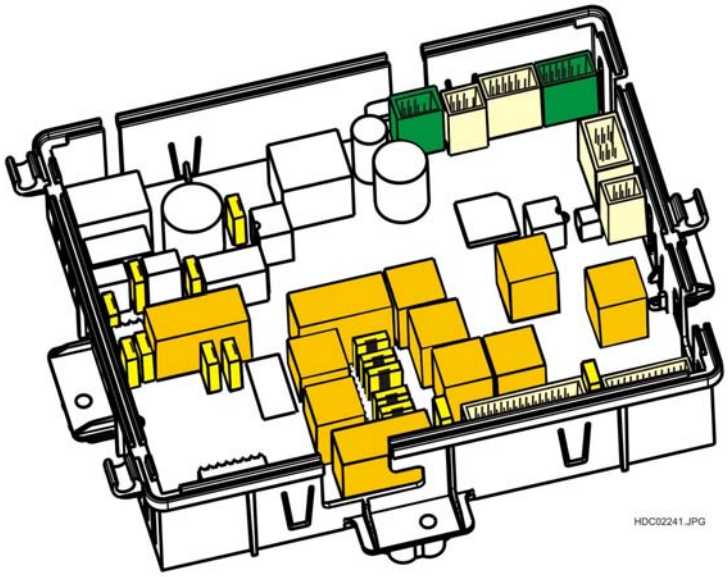


Fig. 12

2.5.1 - CONNECTIONS TO THE POWER BOARD

Here are the positions of the various connections, with descriptions of their functions.

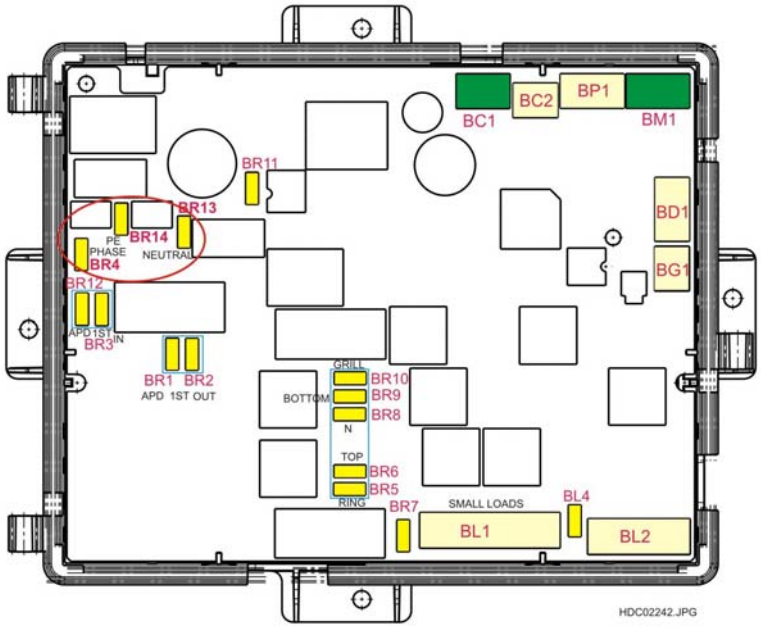


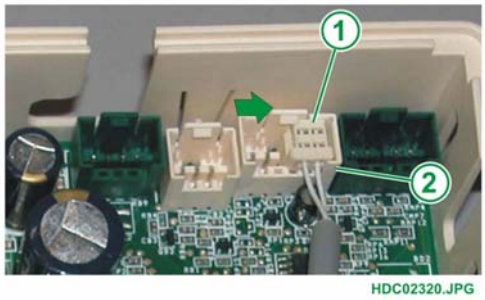
Fig. 13

REFERENCE	DESCRIPTION	CONNECTOR
BC1	CONTROL UNIT	GREEN
BC2	NOT USED	WHITE
BD1	NOT USED	WHITE
BG1	NOT USED	WHITE
BL1	LOW POWER LOADS	WHITE
BL2	NOT USED	WHITE
BL4	PHASE INPUT FOR LOW POWER LOADS	FASTON
BM1	NOT USED	GREEN
BR1	POWER SUPPLIED FROM MAIN RELAY	APD - 1ST OUT (2 POLE)
BR2	POWER SUPPLIED FROM MAIN RELAY	
BR3	SWITCHED OUTPUT FROM MAIN RELAY	APD - 1ST IN (2 POLE)
BR12	SWITCHED OUTPUT FROM MAIN RELAY	
BR4	PHASE INPUT	FASTON
BR5	HEATING ELEMENT FOR FAN COOKING	WHITE - 6 POLE
BR6	TOP HEATING ELEMENT	
BR8	NEUTRAL	
BR9	BOTTOM HEATING ELEMENT	
BR10	HEATING ELEMENT FOR GRILL	
BR7	NOT USED	FASTON
BR11	NOT USED	FASTON
BR13	NEUTRAL	FASTON
BR14	GROUND	FASTON
BP1	OVEN SENSOR (PT500) (*)	WHITE

(*) **NOTE**: When installing the connector, be sure to position it on the right-hand side.

Fig. 14

1 - SENSOR CONNECTOR PLUG
2 - SENSOR CONNECTOR SOCKET



2.5.2 - RELAYS AND THEIR FUNCTIONS

Here are the positions of the relays, with descriptions of their functions:

Fig. 15

REFERENCE	DESCRIPTION
REL1	MAIN RELAY
REL4	RELAY FOR CIRCULAR HEATING ELEMENT
REL5	RELAY FOR GRILL HEATING ELEMENT
REL8	RELAY FOR TOP HEATING ELEMENT
REL9	RELAY FOR BOTTOM HEATING ELEMENT
REL10	RELAY FOR ROAST SPIT MOTOR (NOT USED)
REL11	RELAY FOR CONVECTION FAN
REL12	RELAY FOR DUAL-SPEED COOLING FAN (NOT USED)
REL13	RELAY FOR COOLING FAN
REL15	RELAY FOR OVEN LAMP
REL16	RELAY FOR DOOR LOCK (NOT USED)

2.6 - LIGHT BAR BOARD

The light bar consists of a fluorescent bar illuminated by two LEDs.
These LEDs are powered by the light bar board, which is connected to the power mains and to the control unit.

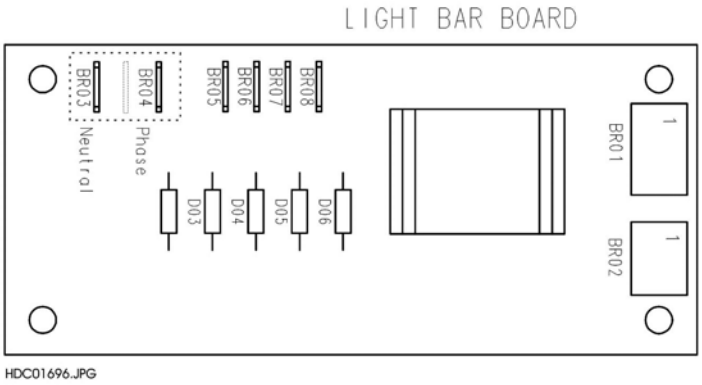


Fig. 16

BR01 - POWER CONNECTOR FOR THE LEDs ON THE LIGHT BAR
BR02 - CONNECTOR FOR DISPLAY BOARD
BR03 - NEUTRAL CONNECTION FROM POWER MAINS
BR04 - PHASE CONNECTION FROM POWER MAINS
BR05 - NOT USED
BR06 - NOT USED
BR07 - NOT USED
BR08 - NOT USED

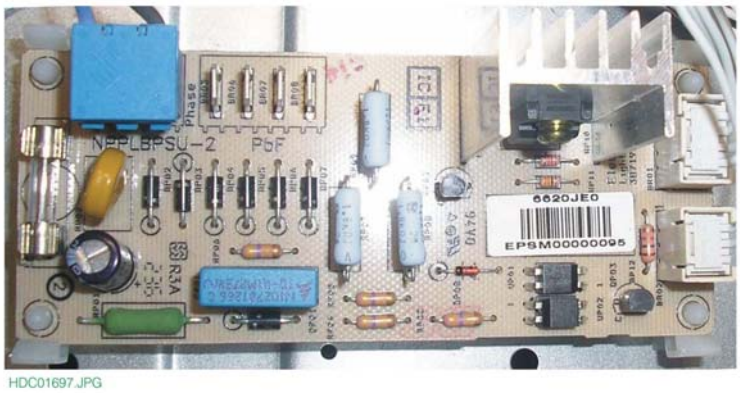


Fig. 17

2.7 - OVEN TEMPERATURE SENSOR

To control oven temperature, the VISION system uses a temperature sensor mounted on a bracket which is screwed onto the oven muffle.
A PT500 resistance-type platinum sensor provides the control board with the information that is required for the following functions:

- Cycling the heating elements until they reach the desired temperature
- Shutting down heating elements in case of overheating or sensor malfunction
- Delaying cooling fan startup and shutdown
- Recognizing relay malfunctions

The temperature sensor is hermetically sealed in a metal sheath, which must be connected to earth.

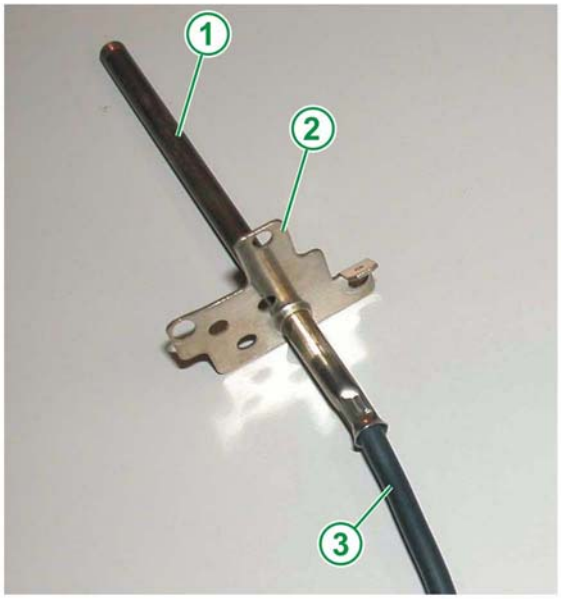


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Fig. 18

1 - PT500 SENSOR
2 - MOUNTING BRACKET WITH EARTH CONNECTION
3 - CONNECTING CABLE

NOTE: When connecting the oven sensor to the power board, make sure the connector is in the correct position (see Fig. 14, p. 12).

2.7.1 - GRAPH OF TEMPERATURE VS SENSOR RESISTANCE

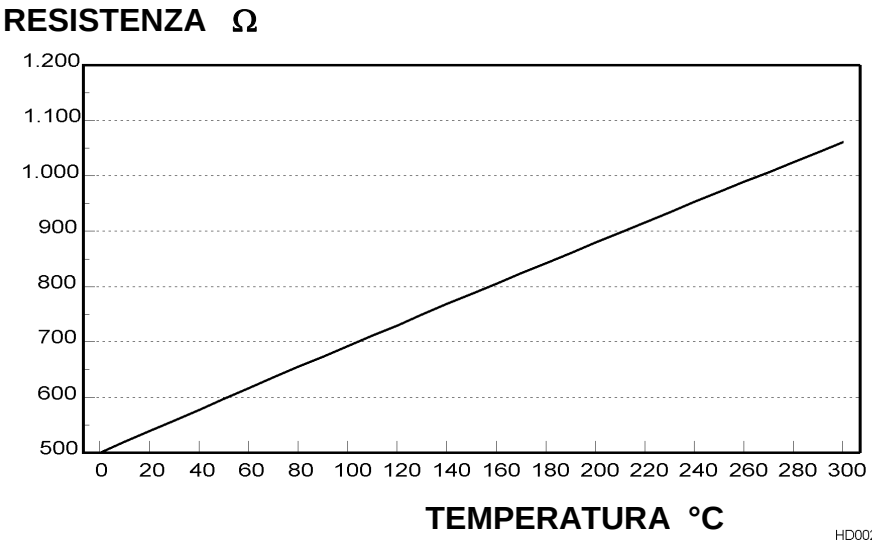

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Fig. 19

2.8 - TECHNICAL SPECIFICATIONS

2.8.1 - SOFTWARE VERSION

This version of Vision is equipped with firmware EBAIG313 V21IG003 and is identified by the following indication on the display:

Fig. 20

NOTE: The **last three digits** of the firmware number (a double series of numbers that appear on the display - in this case “313” and “003)” indicate the modification level. Although these digits may change, the modified firmware is compatible with preceding control units having the same part number. The number appearing on the last line (in this case “49”) shows total hours of oven use.

2.8.2 - TIMES

Time format	24 hours
Maximum cooking time	23 hours 59 minutes
Minute Minder	23 hours 59 minutes

2.8.3 - AUTOMATIC SHUTOFF

The automatic shutoff function is programmed as follows:

Temperature set	Automatic shutoff
30 – 115 °C	After 12 hours 30 minutes
120 – 195 °C	After 8 hours 30 minutes
200 – 245 °C	After 5 hours 30 minutes
250 – 280 °C	After 3 hours

2.8.4 - DIMENSIONS

2.8.4.1 - MINIMUM DIMENSIONS OF COMPARTMENT FOR BUILT-IN INSTALLATION

Height	593 mm
Width	560 mm
Depth	550 mm

2.8.4.2 - USEFUL DIMENSIONS OF OVEN CHAMBER

Height	335 mm
Width	395 mm
Depth	400 mm
Useful volume	53 lt

2.8.5 - POWER RATINGS

Top heating element	800 W
Bottom heating element	1000 W
Top + bottom heating element	1800 W
Single grill heating element	1680 W
Dual grill heating element	2450 W
Rear element (circular)	2000 W
Oven lamp	25 W
Cooling fan (tangential)	25 W
Oven fan (convection)	30 W
Maximum total power requirement	2500 W
Voltage requirement (50 Hz)	230 V

3 - CONTROLS

3.1 - CONTROL PANEL

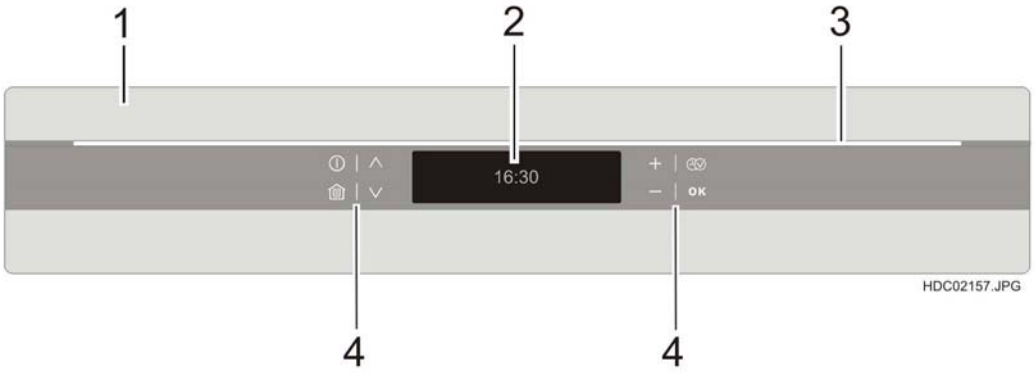


Fig. 21

1 - CONTROL PANEL
2 - DISPLAY
3 - LIGHT BAR
4 - TOUCH-KEY CONTROLS

3.1.1 - DISPLAY

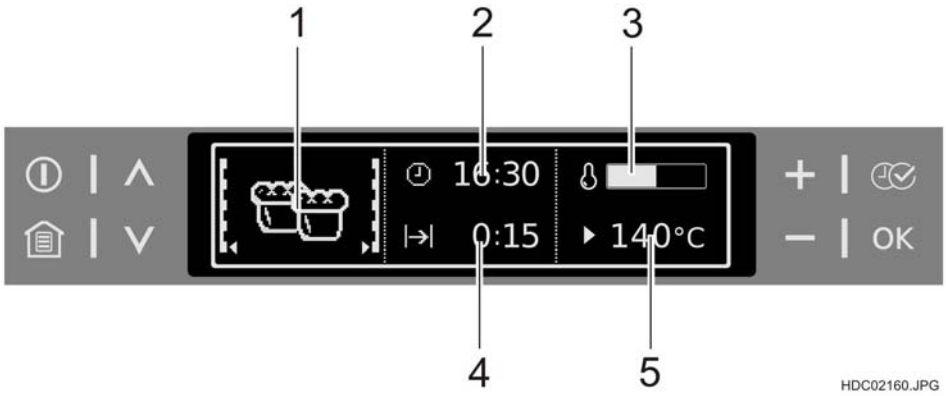


Fig. 22

1 - MENU OPTION SYMBOL (WITH LEVELS)
2 - TIME OF DAY
3 - HEATING DISPLAY
4 - TIMED FUNCTIONS
5 - TEMPERATURE / WEIGHT

3.1.2 - KEYS

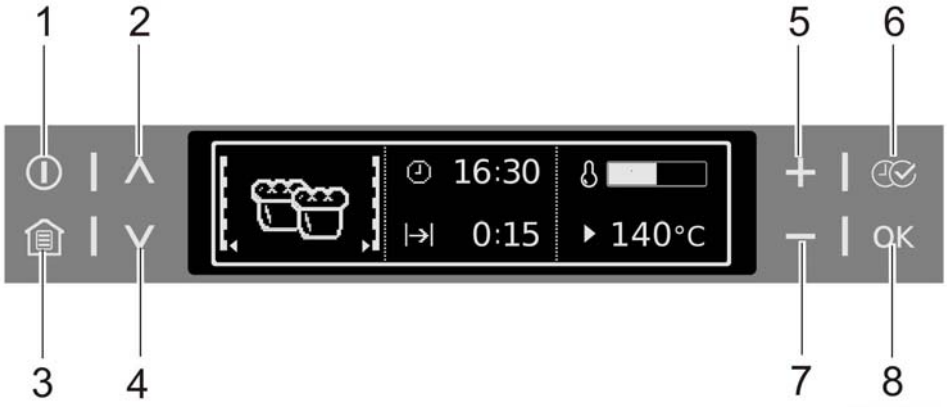


Fig. 23

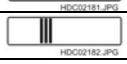
REF.	SYMBOL	DESCRIPTION OF TOUCH KEYS
1		Turns appliance on and off
2		Scrolls UP
3		Displays main menu
4		Scrolls DOWN
5		Increases value (of temperature, time, weight, etc.)
6		Selects time functions and supplementary functions.
7		Decreases value (of temperature, time, weight, etc.)
8	OK	Confirms a selection or accesses a submenu

3.2 - DESCRIPTION OF DISPLAY

The Vision electronic control system has a graphic display whose symbols indicate the functions of the appliance. It also shows animated cooking icons that may differ, depending on the software installed on the appliance in question.

3.2.1 - SYMBOLS SHOWN

Here are the principal symbols for the functions which are available on this version of the Vision electronic control system.

Symbol		Indication (Example)	Function
	Minute Minder	4:30	The Minute Minder is operating
	Time of day	10:00	Displays the time
	Duration	1:00	Displays cooking time
	End Time	14:05	Displays the time when cooking ends
	Start time	0:45	Displays the time when cooking began
	Temperature		Displays the temperature in the oven
			Rapid heating is on (for reduced heating time)
	Weight	1.5 kg	Meanings: - The weight automatic function is selected - The weight can be changed
	Heat-and-Hold	80°C	The **Heat-and-Hold** function is on

4 - HOW TO USE THE VISION CONTROL SYSTEM

4.1 - SETTING THE LANGUAGE

When the appliance is plugged in, the following appears on the display:
- The logo of the company
- The software version and total operating time
- The word “LANGUAGE”

HDC02184.JPG

Fig. 24

1. Use the + and — keys to select the desired language.
2. Press OK to confirm the selected language.

NOTE: The language menu appears only when the appliance is turned on for the first time or after the Factory Test is run.

4.2 - SETTING CONTRAST AND BRIGHTNESS

After the language has been set, “set contrast” and “set brightness” will appear on the display.

1. Use the + and — keys to select the desired levels of contrast and brightness.
2. Press OK to confirm the levels selected.

4.3 - SETTING THE TIME OF DAY

After the contrast and brightness have been set, “set time” will appear on the display.

1. Use the + and — keys to set the hour of the current time of day.
2. Press OK to confirm.
3. Use the + and — keys to set the minutes of the current time of day.
4. Press OK to confirm.

HDC02185.JPG

Fig. 25

4.4 - USING THE MENU

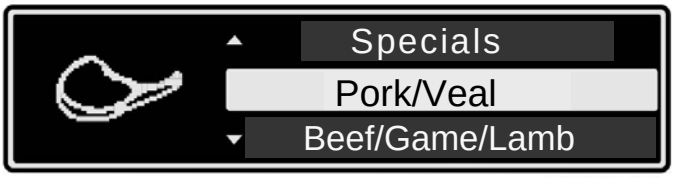
1. Press the ⏻ key to turn the appliance on. The main menu will appear on the display.

HDC02217.JPG

Fig. 26

2. Use the ∨ and ∧ scroll keys to select the desired submenu.
3. Press OK to access the selected submenu.

The corresponding submenu will be displayed.



HDC02218.JPG

Fig. 27

Note: To return to the main menu, press ⌂ wherever it appears.
Note: The Back menu option located at the end of most menus can be used to move to a higher menu.
Note: Any operation can be interrupted by pressing ⌂ to return to the main menu.

4.4.1 - HEATING INDICATOR

When an oven function is **activated,** the gradually elongating bar shows the progress of the heating process.

Fig. 28

HDC02219.JPG

4.4.2 - RAPID HEATING INDICATOR

With some oven functions (such as Turbo Grill) the heating time is reduced by an automatic rapid heating feature (which uses multiple heating elements during initial heating).
A striped bar moves from left to right until the desired temperature is reached.

Fig. 29

HDC02220.JPG

4.4.3 - RESIDUAL HEAT INDICATOR

When an oven function is **terminated**, the residual heat in the oven is displayed.

Fig. 30

HDC02221.JPG

4.4.4 - EXACT TEMPERATURE INDICATOR

During heating, the exact temperature in degrees is shown for 5 seconds instead of the bar on the display.
Afterward, press + and − at the same time to display the exact temperature.

Fig. 31

HDC02222.JPG

4.5 - OVEN LIGHT

The oven light is used to illuminate foods inside the oven and is the first function that appears when the oven is turned on.

To access the oven light function, simply turn on the appliance using the ON/OFF ⏻ key.

Fig. 32

HDC02186.JPG

4.6 - THE FUNCTION MENU

• The oven function menu appears on the display when the appliance is turned on.

• Use the ∨ and ∧ scroll keys to highlight the desired oven function. The menu bar shows the current position within the menu.

Here is how the oven functions are arranged

Main menu		Submenu	
	Assisted Cooking		Pork/Veal
			Beef/Wild Game/Lamb
			Poultry
			Fish
			Cake/Tart
			Pizza/Pie/Bread
			Casserole/Au Gratin cooking
			Convenience
			Special Functions
	Cooking Functions		Oven Light
			Fan Cooking
			Conventional Cooking
			Pizza Setting (30% bottom element and 70% convection)
			Turbo Grill
			Grill
			Dual Grill
			Bottom Heat (bottom heating element)
			Slow cooking
	My Programmes		1 - My Programmes
			2 - My Programmes
			…
			Rename Programme

Main menu		Submenu	
	Basic Settings		Set time of day
			Display time of day
			Set+Go
			Heat-and-Hold
			Extra Time
			Contrast of display
			Brightness of display
			Language
			Signal volume
			Volume of tones
			Alarm/error tones on-off
			Service
			Factory settings

4.6.1 - TABLE OF PRESET TEMPERATURES

A preset temperature is suggested when a cooking function is selected. This temperature can be changed by the user.

Cooking function		**Preset temperature**
	Oven Light	30°C
	Fan Cooking	150°C
	Conventional Cooking	200°C
	Pizza Setting	200°C
	Turbo Grill	180°C
	Grill	250°C
	Dual Grill	250°C
	Bottom Heat (bottom heating element)	150°C
	Slow Cooking	(*)

(*) The user can choose between 2 settings that cannot be changed:
Setting 1: 120°C / 80°C
Setting 2: 150°C / 80°C

4.7 - ASSISTED COOKING MENU

	Category	Dish	
	Pork / Veal	Roast pork	Veal
		Pork loin	Ossobuco
		Pork shin	Stuffed veal breast
		Pork shoulder	Meat loaf
		Veal roast	
	Beef / Wild Game / Lamb	Beef	Roast wild game
		Scandinavian beef	Rabbit
		Roast beef	Wild boar
		Marinated beef	Roast lamb
		Loin of wild game	Lamb joint, medium
		Roast wild game	Leg of lamb
	Poultry	Whole chicken	Chicken thigh
		Whole turkey	Coq au Vin
		Whole duck	Roast duck al'orange
		Whole goose	Stuffed chicken
		Poultry	
	Fish	Whole fish	Stuffed calamari
		Filet of fish	Steamed fish
		Baccalà	Jansson's Temptation
		Fish in salt	

	Category	Dish	
	Cake/Tart	Lemon sponge cake	Ring cake
		Swedish cake	Savarin Cake
		Cookies	Brownies
		Cheesecake	Muffins
		Fruitcake	Sweet tart
		Streusel cake	Carrot cake
		Rich yeast plait	Almond cake
		Yeast plait	Fruit tart
	Pizza / Pie / Bread	Pizza	Cheese pastry
		Onion tart	White bread
		Quiche Lorraine	Whole wheat bread
		Goat cheese flan	Russian cake
		Cheese flan	
	Casserole / Au Gratin	Lasagne	Pasta au gratin
		Cannelloni	Vegetables au gratin
		Potatoes au gratin	Casserole
		Moussaka	Cabbage casserole
	Convenience Foods	Frozen pizza	Bread / Sandwiches
		Frozen American pizza	Frozen bread / Sandwiches, lightly browned
		Cold pizza	Frozen apple strudel
		Frozen pizza snacks	Frozen filet of fish
		French fries	Chicken wings
		Croquettes	Frozen lasagne / Cannelloni
		Hash browns	
	Special Functions	Defrost	Preserve
		Dry	Warm plates
		Keep warm	

4.7.1 - TABLE OF WEIGHTS

The weight of dishes marked with the symbol can be set. Here is a table of weights:

	Category	Dish	Preset weight **gr**	Minimum weight **gr**	Maximum weight	Adjusts in steps of **gr**
	Pork / Veal	Roast pork	1500	800	3000	100
		Pork loin	1500	800	3000	100
		Veal roast	1500	800	2500	100
	Beef / Wild Game / Lamb	Beef	1000	800	2500	100
		Scandinavian beef	1000	800	2000	100
		Roast beef	1000	800	2500	100
		Loin of wild game	1500	800	3000	100
		Roast wild game	1500	800	3000	100
		Roast lamb	1500	800	3000	100
		Lamb joint, medium	1500	800	2500	100
	Poultry	Whole chicken	1200	800	2000	100
		Whole turkey	3000	800	6000	100
		Whole duck	1600	800	2500	100
		Whole goose	3000	900	4500	100
	Fish	Whole fish	700	300	1000	100

4.8 - ASSISTED COOKING WITH WEIGHT AUTOMATIC

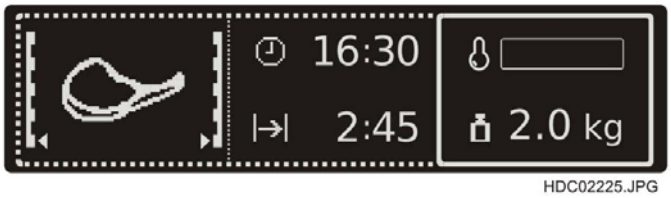
Cooking time is automatically set when the weight of the dish is entered.
Example:

1. Using the ∨ and ∧ scroll keys, select the Assisted Cooking menu option, the desired category and the dish.
2. Press **OK** to confirm.

HDC02224.JPG

Fig. 33

3. Using the ∨ and ∧ scroll keys, select Weight Automatic.
4. Press **OK** to confirm.



HDC02225.JPG

Fig. 34

5. Using the ∨ and ∧ scroll keys, set the weight of the dish. The setting is made in steps of 0.1 kg (see the weight table on p. 27).
   The automatic programme will now start.
   A signal will sound as soon as the programme ends.
6. Press any key to shut off the signal.

4.9 - ASSISTED COOKING WITH AUTOMATIC PROGRAMME

All settings are preset at the factory and cannot be changed.

Example:

1. Using the ∨ and ∧ scroll keys, select the Assisted Cooking menu option, the desired category and the dish.
2. Press **OK** to confirm.
3. Using the ∨ and ∧ scroll keys, select Automatic Programme.
4. Press **OK** to confirm.
5. The automatic programme will now start.
   As soon as the programme ends, a signal will sound.
6. Press any key to shut off the signal.

HDC02226.JPG

Fig. 35

HDC02227.JPG

Fig. 36

4.10 - MANUAL COOKING

With manual cooking, the optimum settings (oven function and temperature) are automatically set for the corresponding dish. However, these settings can be changed by the user when the weight of the dish is unknown or when a personal recipe is used.

Example

1. Using the ∨ and ∧ scroll keys, select the Weight Automatic menu option.
2. Press OK to confirm.
3. Using the ∨ and ∧ scroll keys, select Manual.
4. Press OK to confirm.

Fig. 37

The desired settings for the selected function can now be made.

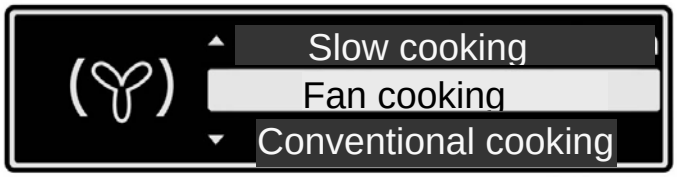
4.11 - OVEN FUNCTION MENU

Oven function		Use	Heating element / fan
	Oven Light	To illuminate the oven	Oven lamp
	Fan Cooking	For **cooking** on a **maximum of three levels** at the same time. Set the oven temperature 20-40°C lower than for Conventional Cooking.	Convection element and convection fan.
	Conventional Cooking	For **cooking** and **roasting** on **one level**.	Top element and bottom element.
	Pizza Setting	To bake dishes on one level that require **greater browning and a crispy bottom.** Set the oven temperature 20-40°C lower than for Conventional Cooking.	30% bottom element, 70% convection element, and convection fan.
	Turbo Grill	To **roast** large pieces of meat or poultry on one level. This function is perfect for **au gratin cooking** and **browning**.	Grill element, top element and convection fan.
	Grill	To **grill** thin foods placed **at the centre of the grill,** and to **toast**.	Grill element.
	Dual Grill	To **grill f**oods in **large quantities,** and to **toast**.	Grill element and top element.
	Bottom Heat	To **finish cooking** tarts with **crumbly bottoms.**	Bottom element.
	Slow Cooking	To prepare roasts that are especially tender and flavourful.	Convection element and convection fan.

4.12 - USING OVEN FUNCTIONS

Example:

1. Press the ⏻ key to turn the appliance on.
2. Use the ∨ and ∧ keys to select the Oven Function menu option.
3. Press **OK** to confirm.



HDC02229.JPG

Fig. 38

4. Using the ∨ and ∧ scroll keys, select the **Fan Cooking** function.
5. Press **OK** to confirm.

HDC02230.JPG

Fig. 39

A signal will sound when the oven is preheated.

NOTE: The oven is heating up when:

- The oven function symbol is moving.
- The oven light turns on.
- The corresponding heating element turns on (for example, the fan).

5 - THE “MY PROGRAMMES” MENU

The “My Programmes” menu is used to store personalised programmes.

Submenu	Description
1 - My Programmes 2 - My Programmes …	To store the optimum settings for personalised programmes.
Rename programme	To rename stored programmes.

NOTE: Up to 20 programmes can be stored.

5.1 - STORING A PROGRAMME

Example:

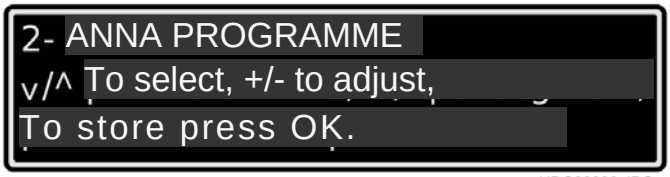
1. Select the desired oven function or Assisted Cooking with the desired settings.
2. During or after the oven function or Assisted Cooking, press until “Save” appears on the display.
3. Press OK to confirm. The next free memory area will now be displayed.
4. Press OK to confirm.
5. The name of the programme can now be written. The first letter will flash.
6. Using the + and − keys, select the desired letter.
7. Using the ∨ and ∧ scroll keys, move the cursor toward the right or left.
   The next letter will flash and can be changed. Proceed in the same way for the other letters.
8. After the name of the programme has been written, press OK to confirm.
   The programme will now be stored.

HDC02231.JPG

Fig. 40

HDC02232.JPG

Fig. 41



HDC02233.JPG

Fig. 42

HDC02234.JPG

Fig. 43

5.2 - RECALLING A PROGRAMME

Example

1. Press the ⏻ key to turn the appliance on.
2. Using the + and − keys, select the My Programmes menu option.
3. Press OK to confirm.
4. Using the ∨ and ∧ scroll keys, select the stored programme.
5. Press OK to confirm.

The stored programme will now begin. Its programmed settings will be used.

Fig. 44

6 - BASIC SETTINGS MENU

NOTE: A number of basic settings can be changed independently from the corresponding application in the oven. Settings can be changed only when no oven function is selected.

	Setting	Display	Description
	Set time	12:15	Used for setting the current time.
	Display time	- On	The time of day is displayed when the appliance is shut off.
		- Off	The time of day is shown when the appliance is shut off, but the display is turned off to save energy.
	Set+Go	- On	The Set+Go function is displayed in the Select Option window and can be activated.
		- Off	The Set+Go function is not displayed in the Select Option window.
	Heat-and-Hold	- On	The Heat-and-Hold function is displayed in the Select Option window and can be activated.
		- Off	The Heat-and-Hold function is not displayed in the Select Option window.
	Extra Time	- On - Off	Selects and cancels the Extra Time function.
	Contrast of Display	1 ….. 10	Sets the contrast of the display in steps.
	Brightness of Display	1 ….. 10	Sets the brightness of the display in steps.
	Language	- Italiano - ….	Selects and sets of the language used on the display.
	Signal volume	1 ….. 10	Increases the volume of the key tones and the signal in steps.
	Volume of Key Tones	- On - Off	Each keypress is confirmed with a tone when the key is pressed: selects and cancels key tones.
	Alarm/Error Tones	- On - Off	An alarm tone is sounded if a command cannot be executed: selects and cancels alarm tones
	Service	EBAIG313 V21IG003	Displays software version and configuration.
	Factory Settings		Resets all settings (and My Programmes) to factory values.

6.1 - USING BASIC SETTINGS

Example

1. Using the + and − keys, select the Basic Settings function.
2. Press OK to confirm.
3. Using the ∨ and ∧ scroll keys, select the setting you wish to change.
4. Press OK to confirm. The current value of the setting will now appear on the display.
5. Using the + and − keys, select the desired value.
6. Press OK to confirm.

The setting has now been changed.

HDC02236.JPG

Fig. 45

6.2 - AUTOMATIC CHANGE IN DISPLAY BRIGHTNESS

When the appliance is turned off, the display dims from 22:00 in the evening to 6:00 in the morning to save energy.

6.3 - BASIC SETTINGS USED EVERY DAY

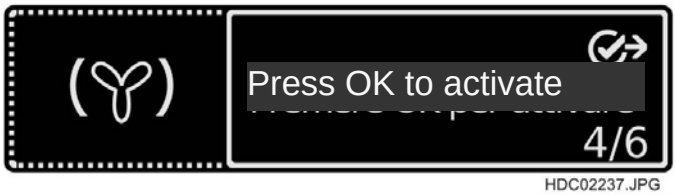
6.3.1 - SET+GO

The Set+Go allows you to set all the settings for a given oven function and then to start the oven at a later time.
Sample application:
In the morning, you prepare a dish and make all the settings that are necessary for cooking it in the oven. Your child comes home at noon, places the dish in the oven and presses any key. The oven turns on with the settings you made previously.
Important:
- The cooking time must be set

6.3.2 - ACTIVATING THE SET+GO FUNCTION

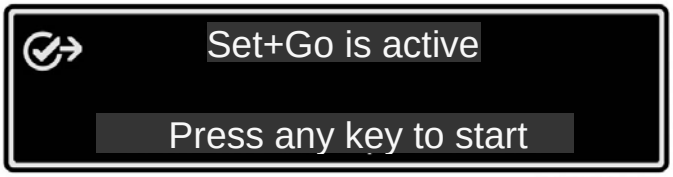
Example

1. Select the oven function with the desired settings.
2. Press repeatedly until “Set+Go” appears on the display.
3. Press OK to confirm. The Set+Go function is now activated.



HDC02237.JPG

Fig. 46



HDC02238.JPG

Fig. 47

6.3.3 - HOW TO START SET+GO

1. Press any key (except ⏻).
   The selected oven function will start.
   A signal will sound as soon as the function ends.
2. Press any key to silence the signal.

NOTE: The Key Lock operates while the function selected with Set+Go is in progress (see the paragraph on the Key Lock).

NOTE: Use the Basic Settings menu to select and cancel the Set+Go function.

6.3.4 - HEAT-AND-HOLD

The Heat-and-Hold function keeps prepared dishes warm for 30 minutes after cooking or roasting is completed.
This function is particularly useful when guests are late.
Requirements for the Heat-and-Hold function:
- The temperature must be set higher than 80°C.
- The duration must be set.

6.3.5 - SELECTING THE HEAT-AND-HOLD FUNCTION

1. Select the desired oven function.
2. Press repeatedly until “Heat-and-Hold” appears in the window.
3. Press OK to confirm.
   The Heat-and-Hold function is now active.
4. As soon as the oven function ends, A signal will sound and the Heat-and-Hold function will begin.

The selected oven function will now continue at 80°C for 30 minutes.
After the 30 minute period, the oven will shut off.

Fig. 48

NOTE: The Heat-and-Hold will remain active regardless of the oven function selected, which can be changed as desired.

NOTE: Use the Basic Settings menu to select and cancel the Heat-and-Hold function.

6.3.6 - EXTRA TIME FUNCTION

When Extra Time is selected, the time for the selected function (the last function selected) will be extended for the programmed Extra Time when the function ends.
Important:
- This function can be selected on all oven functions with Duration or Weight Automatic.

Use the Basic Settings menu to select and cancel the Extra Time function.

6.3.7 - SELECTING THE EXTRA TIME FUNCTION

The oven function ends.
A signal sounds and a message is displayed.

1. Press any key (except).
2. The Extra Time message will be displayed for about 5 minutes.
3. Press to **select** Extra Time.
4. Using the and keys, set the duration of Extra Time.
5. Start Extra Time by pressing OK or let the function start automatically after 5 seconds.

The settings of the oven function will be displayed with the new duration.

6.3.8 - SERVICE FUNCTION

The Service Function displays the software version and the configuration.

1. From the Basic Settings menu, select Service using and keys.
3. Press OK to confirm.
4. The software version will appear on the display, along with total hours of oven operation (on the last line - see Fig. 50).

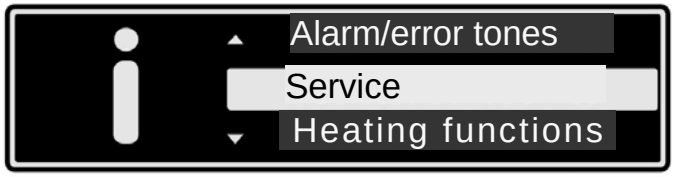


Fig. 49

Fig. 50

6.4 - ADDITIONAL FUNCTIONS

6.4.1 - MINUTE MINDER

A signal sounds when the time set on the Minute Minder expires.
This function does not affect oven operation.
A signal sounds and a message is displayed.

1. Press repeatedly until “Minute Minder” appears on the display.
   Using the + or − keys, set the time.
2. Press OK to confirm, or wait 5 seconds.

The last option selected and the remaining time will now be displayed.
When 10% of the programmed time remains, a signal will sound and a message will be displayed.

3. Press any key (except ⏻) to silence the signal.

HDC02265.JPG

Fig. 51

HDC02266.JPG

Fig. 52

NOTE: The Minute Minder remains selected even if the oven function is changed or the appliance is shut off.

6.4.2 - DURATION OR END TIME

DURATION
To set the amount of time the oven will operate.

END TIME
To set the time of day when the oven will shut off.

1. Select the desired oven function.
2. Press repeatedly until “Duration/End Time” appears on the display.
3. Using the + or − keys, set the desired cooking time or the shutoff time (23 hours 59 minutes, max.).
4. Press OK to confirm, or wait 5 seconds.
   The settings for the selected oven function will now be displayed along with the programmed duration and shutoff time.
   When the time expires, a signal will sound and a message will be displayed.
   The oven will then shut off.
5. Press any key (except ⏻) to silence the signal.

HDC02267.JPG

Fig. 53

HDC02268.JPG

Fig. 54

NOTE: The programmed duration will not change regardless of the oven function selected. Thus, the oven function can be changed as desired; however, the new function must not have a preset duration.

6.4.3 - RESIDUAL HEAT FUNCTION on DURATION |→| OR END TIME →|

When the **Duration** |→| or **End Time** →| function is used, the heating elements shut off when 90% of the set or calculated time has elapsed. The residual heat in the oven is used to continue cooking until the end of the preset time (from 3 to 20 minutes).

6.4.4 - COMBINING DURATION |→| AND END TIME →|

The **Duration** |→| and **End Time** →| functions can be used at the same time to turn on and shut off the oven automatically at a later time.

1. Select the desired oven function.
2. Press repeatedly until "Duration/End Time" appears on the display.
3. Using the **Duration** |→| function, set the time necessary to cook the dish (for example, 1 hour).
4. Press **OK** to confirm.
5. Using the **End Time** →| function, set the time when the dish must be ready (for ex. 14:05).
6 Press **OK** to confirm, or wait 5 seconds.

The selected oven function will be displayed for a few seconds with the preset duration and shutoff time.

A message will be displayed when the programme has been set up.

HDC02269.JPG

Fig. 55

HDC02270.JPG

Fig. 56

HDC02271.JPG

Fig. 57

6.4.5 - KEY LOCK

Activating the key lock

1. Select the desired oven function.
2. Press repeatedly until "Key Lock" appears on the display.
3. Press **OK** to confirm.
   The key lock is now activated.

HDC02272.JPG

Fig. 58

Deactivating the key lock

2. Press .
3. Press **OK** to confirm.

NOTE: The **Key Lock** does not protect against accidental shutoff. The **Key Lock** is automatically deactivated when the appliance is shut off.

6.4.6 - APPLIANCE LOCKED FUNCTION (FOR CHILD PROTECTION)

The oven cannot be operated when the Appliance Locked function is activated.

Activating the Appliance Locked function

No function can be selected when the Appliance Locked function is activated.

1. Press and at the same time until “Appliance locked” appears on the display.

The Appliance Locked function is now activated.

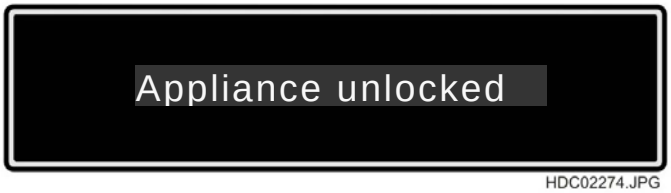
HDC02273.JPG

Fig. 59

Deactivating the Appliance Locked Function

1. Press and at the same time until “Appliance unlocked” appears on the display.

The Appliance Locked function is now deactivated and the oven is ready for use.



HDC02274.JPG

Fig. 60

6.4.7 - AUTOMATIC SHUTOFF

The oven will shut off automatically if it is not turned off or the temperature is not changed within a certain period of time.

The oven will shut off automatically after:

12 hours and 30 minutes	at a temperature of	30 - 115 °C
8 hours and 30 minutes	at a temperature of	120 - 195 °C
5 hours and 30 minutes	at a temperature of	200 - 245 °C
3 hours	at a temperature of	250 - max°C

To turn the oven back on after an automatic shutoff:

Press OK.

6.5 - DEMO FUNCTION

This function is used to demonstrate the functions of the oven in stores or showrooms. No energy is consumed, except for the energy used by the oven light.
To activate this function when the oven is off:

1 - Press and hold down ⏻.

Fig. 61

2 - The oven will turn on and off, and a signal will sound.

Fig. 62

2 - Hold down the ⏲ and — keys until the signal sounds once again (see Fig. 63).

Fig. 63

3 - Press ⏻ to turn the oven on. The first function (oven light) will appear on the display together with "DEMO" at the top of the frame (see Fig. 64). The Demo function is now operating.

Fig. 64

NOTE: The "Demo" function deactivates automatically when the oven is shut off.

7 - ERROR CODES

The VISION system performs internal diagnostic tests. When a fault is detected, an error code will appear on the display, as shown in Fig. 65.

The table below lists the various error codes:

ERROR CODE	CAUSE OF ERROR
F0	Internal error on the power board
F1	Door cannot be locked (self-cleaning ovens only)
F2	Door cannot be unlocked (self-cleaning ovens only)
F3	Software error, malfunction on control unit (EEPROM)
F4	Sensor resistance out of range (sensor open or shorted) for more than 5 seconds
F5	Temperature out of acceptable range (> 350°C on normal ovens) (> 530°C on self-cleaning ovens)
F8	Communication interrupted between control unit and power board
F9	Software incompatibility between control unit and power board
F14	Software error

Here is how an error code appears on the display.

Example of an error code (F5):

Fig. 65

8 - DIAGNOSTIC TESTS

The diagnostic programme (factory test) is a series of tests that are performed at the factory to check ovens for proper operation. This procedure can be used to troubleshoot malfunctions.

8.1 - ACTIVATION

To start the factory test on this version, turn on the appliance and follow the procedure shown below before making any settings (language, time):

When the Electrolux logo appears on the display at start-up (see Fig. 66), press and **OK** at the same time.

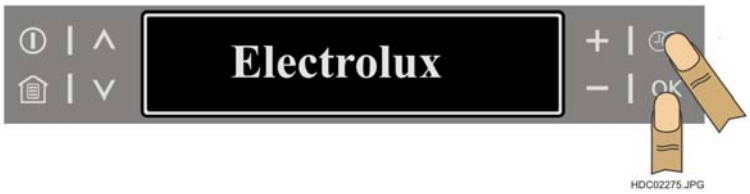


Fig. 66

Hold down the keys until the screen shown in Fig. 67 appears.
The factory test is now running.

Fig. 67

NOTE: If the above procedure is unsuccessful, unplug the appliance and repeat the operation.

8.2 - HEATING COMPONENTS

A test of the various heating components is the first diagnostic test that is run. The components are tested in a series of four steps:

Fig. 68

To move to the next step, press .

Fig. 69

The test sequence is as follows:

No.	SYMBOL	WORDING ON DISPLAY	DESCRIPTION
1		T clfL Lamp	Top element+ cooling fan + oven lamp
2		B clfL Lamp	Bottom element+ cooling fan + oven lamp
3		Rf clfL Lamp	Circular element + convection fan + cooling fan + oven lamp
4		Gf clfL Lamp	Grill element +spit roast motor + cooling fan + oven lamp

IMPORTANT : Pressing again will repeat the test sequence.

8.3 - CHECKING THE OK KEY AND THE OVEN TEMPERATURE SENSOR

The temperature sensor is tested by measuring the current temperature in the oven.

To start the sensor test, press OK. The temperature detected in the oven will appear on the display.

Fig. 70

8.4 - DISPLAYING THE SOFTWARE VERSION

To check the version of software installed:

Press OK .

Fig. 71

NOTE: The number on the last line shows the total hours of oven operation.

8.5 - DISPLAY TEST

The display test consists of a number of levels of brightness, which are activated by pressing OK :

HIGH

LOW

MEDIUM SPLIT

FRAME

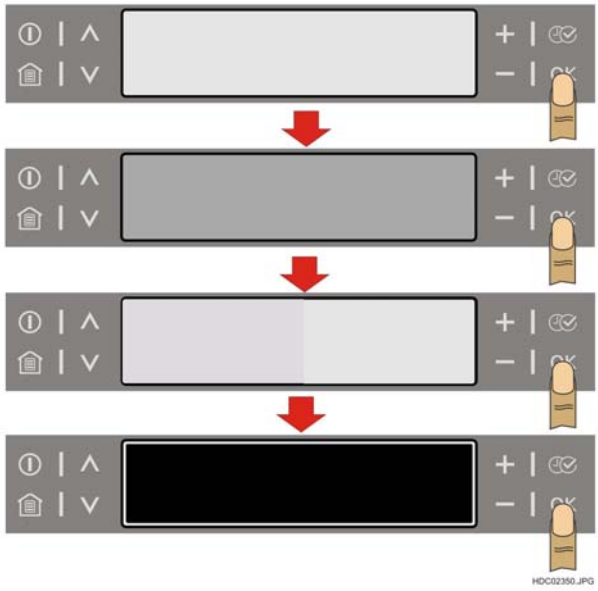


Fig. 72

8.6 - SETTING THE BRIGHTNESS

Press OK to bring up the brightness adjustment submenu.

Use + and − to check whether the display brightness can be adjusted correctly.

Fig. 73

8.7 - TO END THE TEST

Press **OK** and the wording shown on the right will appear on the display.

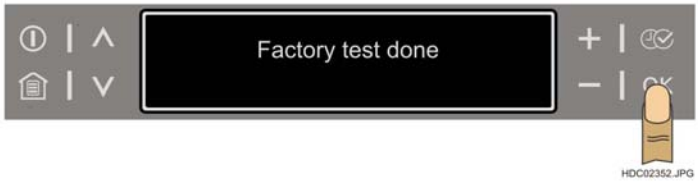


Fig. 74

8.8 - CHECKING THE ON / OFF KEY AT THE END OF THE TEST

When "**Factory test done**" appears on the display, press ON / OFF ⏻ to exit the test mode. The time will appear on the display, and the residual heat bar will also appear if oven temperature exceeded 40°C during the tests.

Fig. 75

9 - FUNCTIONAL DIAGRAM

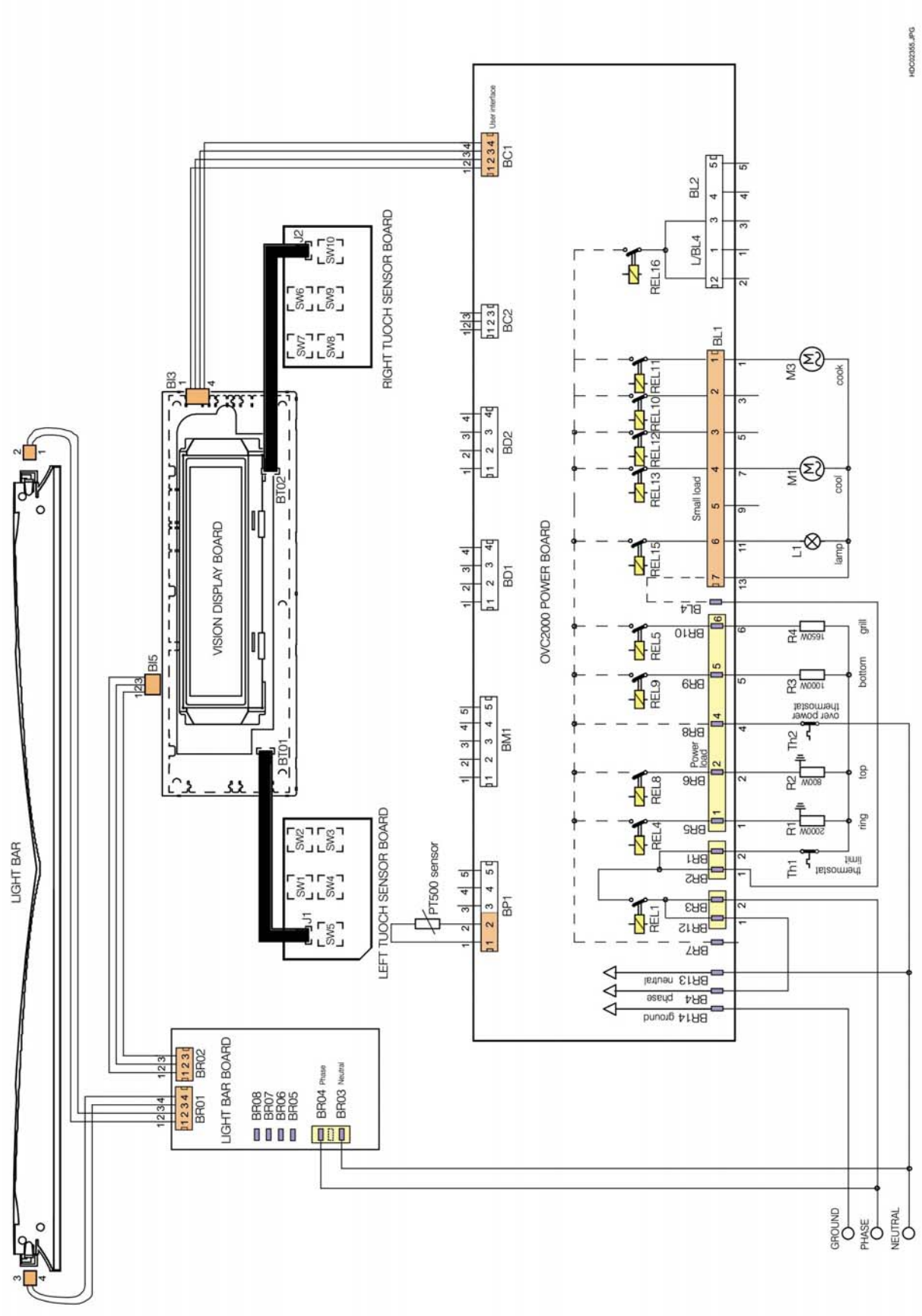


Fig. 76

9.1 - LEGEND FOR DIAGRAM

GROUND	- EARTH
L1	- OVEN LAMP
LEFT TOUCH SENSOR BOARD	-
LIGHT BAR	-
LIGHT BAR BOARD	-
M1	- COOLING FAN
M3	- CONVECTION FAN
NEUTRAL	-
PHASE	-
POWER BOARD	- OVC2000 POWER BOARD
PT500 sensor	- OVEN TEMPERATURE SENSOR
R1	- CONVECTION ELEMENT
R2	- TOP ELEMENT
R3	- BOTTOM ELEMENT
R4	- GRILL ELEMENT
RIGHT TOUCH SENSOR BOARD	-
Th1	- SAFETY THERMOSTAT
Th2	- POWER LIMITING THERMOSTAT
VISION DISPLAY BOARD	-

9.2 - FUNCTIONAL DESCRIPTION OF OVEN

The mains power for the system enters the power board, which generates low voltage for powering the control unit. The light bar is powered by the light bar board, which is controlled by the control unit.
The heating elements in the oven are protected by safety thermostat Th2, which cuts off the power if the oven overheats due to an electronics malfunction. The entire oven is protected by safety thermostat Th1.
When a cooking function is selected, the proper relays for the selected function are excited on the power board.
Also connected to the power board is temperature sensor PT500, whose resistance changes as oven temperature changes. When the electronic system detects that the resistance of sensor PT500 corresponds to the programmed temperature, the heating elements are shut off.
If oven temperature exceeds 120°C, relay REL13 starts cooling fan M1 to improve cooling in the areas on the oven housing (muffle) where the various electronic components are located.
At the end of the programmed cooking function, or when the appliance is shut off, the cooling fan will continue to operate until the temperature at the centre of the oven falls below 110°C.
If a malfunction occurs (such as a faulty relay or temperature sensor), the system recognises the malfunction (by detecting the information sent by the temperature sensor) and cuts the power to the appliance by switching safety relay REL1.
The system also displays the error code for the malfunction (see the chapter entitled, “Error Codes”).